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Evaluation of UK internet sources on information about Melatonin use in children

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Focal Points

- Websites were grouped according to host categories, (i.e. governmental, professional, commercial and charity) and scored using a bespoke instrument to evaluate the quality of information on melatonin as a sleep aid for children.
- 26 websites were evaluated against 20 criteria measuring the quality of clinical and physical attributes of the site. Each attribute scored 0, 1 or 2 (max score of 40). The mean (SD) total score was 18.5 (5.6) out of 40. Sites scored poorly for their clinical content [6.6 (3.6) out of 22] but scored more favourably for the physical characteristics [11.7 (2.9) out of 18]
- The quality of information about melatonin online is extremely basic and limited.

Introduction

Sleep disorders amongst children with behavioural/neurodevelopmental disorders are common. Melatonin, a naturally occurring hormone is licensed for insomnia in adults aged >55 years but remains unlicensed in children. Nevertheless, a variety of strengths and formulations are available and widely used in this population.[1] Parents are likely to consult the internet for information about sleep disorders/ managing sleep in children using a generalised search of commonly used words and phrases and are unlikely to specify melatonin given their relative ignorance of it. This study reports on the evaluation of melatonin information online.

Methods:

The phrases “child not sleeping” and “sleep disorders in children” were entered into Google and Bing search engines in November 2015. The first fifty URLs from each search were visited (200 URLs). However, only those websites that were UK based (n = 26) were evaluated using the Strathclyde Website Evaluation Form (SWEF), a tool previously used and validated in other conditions.[2] Two independent evaluators scored each site, ($\kappa = 0.81$). The clinical content was measured by 11 criteria, physical attributes by 9 criteria. Each attribute was scored 0, 1 or 2, giving a maximum total score of 40. Basic frequency and ANOVA tests were performed.

Results:

Individual sites were grouped into their host categories and scores totalled to give category mean values. The mean (SD) total score for all 26 sites was 18.5 (5.6) out of 40. A breakdown of scores per host category is given below.

	SWEF Mean (SD) Total score (max 40)	SWEF Mean (SD) Clinical score (max 22)	SWEF Mean (SD) Physical score (max 18)
Government/Professional (n = 3)	24.7 (5.1)	10 (4.3)	14.7 (1.1)
Miscellaneous (n = 10)	18.4 (5.9)	6.7 (3.7)	11.7 (2.4)
Commercial organisations (n = 6)	17.7 (3.1)	5.7 (3.6)	12.0 (3.2)

Charities/ support groups (n = 7)	16.1 (6.1)	6.0 (3.2)	10.1 (3.3)
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The total mean (SD) SWEF score for clinical attributes was 6.6 (3.6) out of 22. Only five sites mentioned melatonin by name and only one site provided details of doses used in clinical practice. The total mean (SD) SWEF score for physical attributes was 11.7 (2.9) out of 18. Authorship details were scarce across the sample with more than half of sites failing to provide any author details. Nine (34%) sites were found to be updated/created within the previous 3 years. Only six sites contained references from credible sources. Discussion: Online information in the UK about melatonin as a sleep aid for children is scarce and generally of low quality. Given the unlicensed nature of melatonin use in children, pharmacists may be consulted as an additional source of information and whilst aware of the limiting nature of melatonin information online, could direct parents to sites hosted by the RCPsych or BootsWebMD which performed the highest in terms of accountability and clinical content. Limitations of this study include the low number of sites, however it was felt important to only analyse UK based sites given the differences in product licensing and hence supply (availability) in other countries.

References

1. NICE (2013) Sleep disorders in children and young people with attention deficit hyperactivity disorder: Melatonin. Available at: <https://www.nice.org.uk/advice/esuom2/chapter/key-points-from-the-evidence> (Accessed: 27 March 2016)
2. Akram et al. (2008). Characterisation and evaluation of UK websites on attention deficit hyperactivity disorder. Arch Dis Child: 93(8); 695–700.